

***IN THE UNITED STATES PATENT AND TRADEMARK OFFICE***

Applicants: Jianjun WANG et al.  
Title: CARBON NANOSTRUCTURES AND METHODS OF  
MAKING AND USING THE SAME  
Appl. No.: 10/574,507  
Filing Date: April 3, 2006  
Examiner: Unassigned  
Art Unit: Unassigned

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §1.56**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 C.F.R. §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 C.F.R. §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 C.F.R. §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 C.F.R. §1.97(b), before the mailing date of the first Office Action on the merits.

**RELEVANCE OF EACH DOCUMENT**

The relevance of the foreign-language document is described in the present specification. An English translation of the foreign-language document is not readily available. However, the absence of such translation does not relieve the PTO from its duty to consider the submitted foreign language document (37 C.F.R. §1.98 and MPEP §609).

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Although Applicant believes that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 19-0741.

Respectfully submitted,

Date

September 5, 2006

By

Richard C. Peet

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Registration No. 35,792

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				Filing Date	April 3, 2006
				First Named Inventor	Jianjun WANG
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
				Attorney Docket Number	047911-0103
Sheet	1	of	6		

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1	2003/0175462	A1	NISHINO et al.	09-18-2003	
	A2	5,372,686	A	TIMBERLAKE et al.	12-13-1994	

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	A3	AFFOUNE et al., "Experimental evidence of a single nano-graphene," J. Chem. Lett., 2001, Vol. 348, pp. 17-20.	
	A4	AIZAWA et al., "Bond softening in monolayer graphite formed on transition-metal carbide surfaces," Phy. Rev. B, 1990, Vol. 42, pp. 11469-11478.	
	A5	AL-JISHI et al., Phys. Rev. B., 1982, Vol. 26, pp. 4514-4522.	
	A6	ANDERSSON et al., "Structure and electronic properties of graphite nanoparticles," Phys. Rev. B., 1998, Vol. 58, pp. 16387-16385.	
	A7	ANDO et al., "Preparation of carbon nanotubes by arc-discharge evaporation," Japanese Journal of Applied Physics, Part 2: Letters, 1993, Vol. 32, pp. L107-L109.	
	A8	ANDO et al., "Production of petal-like graphite sheets by hydrogen arc discharge," Carbon, 1997, Vol. 35, pp. 153-158.	
	A9	BAUGHMAN et al., Science, 2002, Vol. 297, pp. 787-	
	A10	BONARD et al., Solid-State Electron., 2001, Vol. 45, pp. 893-	
	A11	CHEN et al., "Exfoliation of graphite flake and its nanocomposites," Carbon, 2003, Vol. 41, pp. 619-621.	

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	A12	CHEN et al., "Preparation and characterization of graphite nanosheets from ultrasonic powdering technique," Carbon, 2004, Vol. 42, pp. 753-759.	
	A13	CHEN et al., "Preparation of polystyrene/graphite nanosheet composite," Polymer, 2003, Vol. 44, pp. 1781-1784.	
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	A15	DECKMAN et al., Appl. Phys. Lett., 1982, Vol. 41, pp. 377-379	
	A16	DECKMAN et al., J. Vac. Sci. Technol. B, 1983, Vol. 1, pp. 1109-1112	
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	A18	DRESSELHAUS et al., Adv. Phys., 2000, Vol. 49, pp. 705-814	
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	A20	FERRARI et al., "Interpretation of Raman spectra of disordered and amorphous carbon," Phys. Rev. B, 2000, Vol. 61, pp. 14095-14107.	
	A21	GONZALEZ et al., "Electron-electron interactions in grapheme sheets," Phys. Rev. B, 2001, Vol. 63, pp. 134421/1-1/8.	
	A22	GRÖNING et al., Solid-State Electron, 2001, Vol. 45, pp. 929-944	
	A23	HASS, K.C., Phys. Rev. B., 1992, Vol. 46, pp. 139-150.	
	A24	HOLLOWAY, Brian C., "Carbon Nanostructures – New Morphologies of an Old Element," BCHPNNL Presentation, June 14, 2004, 43 pgs.	

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	A25	HUANG et al., "Growth of large periodic arrays of carbon nanotubes," Appl. Phys. Lett., January 20, 2003, Vol. 82, No. 3, pp. 460-462.	
	A26	HULTEEN et al., J. Phys. Chem. B, 1999, Vol. 103, pp. 3854-3863	
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	A33	KUSAKABE et al., Phys. Rev. B: Condensed Matter and Materials Physics, 2003, Vol. 67, pp. 092406 (abstract).	
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	A36	LIM et al., J. Non-Cryst. Solids, 2002, Vol. 864, pp. 299-302.	
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	A38	MICHAELSON, H.B., J. Appl. Phys., 1949, Vol. 21, pp. 536-540	
	A39	MILNE et al., Diamond Relat. Mater., 2001, Vol. 10, pp. 260-264	
	A40	NAKADA et al., "Edge state in grapheme ribbons: nanometer size effect and edge shape dependence," Phys. Rev. B, 1996, Vol. 54, pp. 17954-17961.	
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	A44	OBRAZTSOV et al., "Electron field emission and structural properties of carbon chemically vapor-deposited films," Diamond and Related Materials, 1999, Vol. 8, pp. 814-819.	
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	A46	OSHIMA et al., "Surface phonon dispersion curves of graphite (0001) over the entire energy region," Solid State Comm., 1988, Vol. 65, pp. 1601-1604 (abstract).	
	A47	OSHIYAMA et al., "Prediction of electronic properties of carbon-based nanostructures," Physica B, 2002, Vol. 323, pp. 21-29.	
	A48	PAILLARD et al., Phys. Rev. B, 1994, Vol. 49, pp. 11433-11439.	
	A49	PARK et al., J. Vac. Sci. Technol. B, 2003, Vol. 21, pp. 562-566.	
	A50	PEIGNEY et al., "Specific surface area of carbon nanotubes and bundles of carbon nanotubes," Carbon, 2001, Vol. 39, pp. 507-514.	

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	A52	PRASAD et al., "Heat-treatment effect on the nanosized graphite [π]-electron system during diamond to graphite conversion," Phys. Rev. B., 2000, Vol. 62, pp. 11209-11218.	
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	A56	ROBERTSON, J., J. Vac. Sci. Technol. B, 1995, Vol. 17, pp. 659-665.	
	A57	SAITO, Y., J. Nanosci. Nanotechnol., 2003, Vol. 3, pp. 39-50.	
	A58	SHANG et al., "Uniform carbon nanoflake films and their field emissions," J. Chem. Lett., 2002, Vol. 358, pp. 187-191.	
	A59	SOLIN, S.A., Physica B&C, 1980, Vol. 99, pp. 443-452 (abstract).	
	A60	TUINSTRA et al., "Raman spectrum of graphite," J. Chem. Phys., 1970, Vol. 53, pp. 1126-1130.	
	A61	VICULIS et al., "A chemical route to carbon nanoscrolls, Science, 2003, Vol. 299, p. 1361.	
	A62	WAKABAYASHI et al., "Electronic and magnetic properties of nanographite ribbons," Phys. Rev. B, 1999, Vol. 59, pp. 8271-8282.	
	A63	WANG et al., "Free-standing subnanometer graphite sheets," Applied Physics Letters, August 16, 2004, Vol. 85, No. 7, pp. 1265-1267.	

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	A65	WANG et al., "Synthesis of carbon nanosheets by inductively coupled radio-frequency plasma enhanced chemical vapor deposition," Carbon, 2004, pp. 1-6.		
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	A70	ZHU et al., "Nitrogen Doped Carbon Nanoflakes Synthesized by RFI PECVD on Patterned Nickel Catalyst Layer," 2003 Poster, AVS 03 Baltimore, MD, 1 page.		
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	A72	ZHU et al., Science, 1998, Vol. 282, pp. 1471-1473.		
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